

**For each question, you need to find the answer and show your work. Each problem is worth 3 points: one for the correct answer and two for showing your work. For some problems, you may just need to write out how you know you have the correct answer.**

1. What is the distance from  $-14$  to its opposite on the number line?

**For numbers 2-6, find an integer that describes each situation.**

2. A weight gain of 2 lb per week for 8 consecutive weeks.
3. The distance and direction from a diving board 9 ft above the surface of the water to the bottom of the pool 12 ft below the surface.
4. The total gain if a team gains 7 yd on each of 4 consecutive plays in a football game.
5. The result of a diver ascending 12 ft and then diving down 23 ft.
6. The average weekly change for a weight loss of 36 lb over 9 weeks.

7. Matt Mitarnowski made a deposit of \$74 into his checking account. He wrote checks for \$19, \$43, and \$27. What was the net change to the balance in his account?

8. A football team gained 4 yards on a play, but was penalized 15 yards for personal foul after the play. What was the net result for the play and penalty?

9. The hottest temperature recorded in Pennsylvania was  $111^{\circ}\text{F}$  at Phoenixville in 1936. The lowest was  $153^{\circ}\text{F}$  colder than that, in the town of Smethport in 1904. What was the coldest temperature ever recorded in Pennsylvania?

**Open-Ended Question: Answer the following question on a separate piece of paper. Make sure as you answer the open-ended question that you show your work AND explain how you know you are doing the correct work. YOU MUST EXPLAIN WHAT YOU ARE DOING!!!**

Consider the list of integers ordered on a number line.

A. What happens to the value of a negative integer as its absolute value increases?

B. Give an example to support your answer to part A.